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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,254	12/01/2003	John D. Zalewski	6978-000288	1943

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HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/725,254

Applicant(s)

ZALEWSKI ET AL.

Examiner

Christopher P. Schwartz

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-20 and 23-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-20 and 23-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Christopher P. Schwartz
CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

1. Applicant's response filed 5/11/05 has been received and considered. Claims 8-20 and 23-31 are pending. Claims 21,22,32 have been canceled.

Information Disclosure Statement

2. The information disclosure statement filed 5/11/05 has been received and considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8- 11,13-15,17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frost in view of Hara et al. '075 and newly cited Canadian publication 2492481.

Regarding claim 1 Frost shows a vehicle comprising an engine (inherent) a primary driveline 36,38 and having a pair of wheels coupled to a brake (also inherent but see figure 7) a secondary driveline having a pair of second wheels and coupled to a secondary driveline 44,46; a clutch 88 capable of interconnecting the engine to the secondary driveline. Frost also shows sensors at 54 for determining proper control of the hydraulic control system 58 via controller 52.

Frost lacks the specifics of the wheel brakes and clutch fluidly connected to one another.

Hara et al. is relied upon to show such systems are probably interrelated, as seen in figure 1. Note the ABS actuator, however, at 36 and its function. As pointed out by applicants the ABS actuator is at 36 and the hydraulic pressure supply system to supply the clutch pressure is shown at 16, the details of which are shown more specifically in figure 4. From figure 1 it is clearly shown that the ABS control section and the 4WD control section systems are interrelated with the hydraulic pressure control system for the clutch 66 in transfer case 22. The ABS actuator, while not described in any particular detail, could simply be a known multi-position electromagnetic valve to regulate the fluid pressures to the wheel brakes. Therefore, to reduce the number of parts, it would have been obvious to have interconnected the ABS controller 18B and ABS actuator 36 of the brakes with the clutch control system 16 to reduce the number of parts.

Notwithstanding this argument, the reference to CA 2492481 (note earliest publication date is 4/25/2003) is relied upon to provide a more detailed description of interrelating the brake and clutch control systems for improved vehicle dynamics control at a reduced cost. See the discussion on pages 1-3. (The drawings in this document are somewhat lacking for a visual aid).

One having ordinary skill in the art at the time of the invention would have found it obvious to have provided the vehicle of Frost with a hydraulically interrelated brake and clutch system for vehicle stability and traction control on an all wheel or four wheel drive vehicle that would reduce costs by reducing the number of systems employed.

Regarding claim 9 Nagae is relied upon to show a similar system to that of Frost, as modified, but to provide a clearer picture of the valve and sensor arrangements of a typical ABS system as shown in figure 7.

The requirements of claims 10,11,13-15 are fairly taught by the combined teachings of the references above.

Regarding claim 17 these limitations are fairly suggested by the references above. It is old and well known to detect pressures applied to the brakes and/or clutches in order to modulate it.

Regarding claims 18-20 these limitations are met.

5. Claims 12, 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Frost in view of Hara et al. '075 and CA 2492481 as applied to claims 8,15 above, and further in view of US publication to Matsuno et al or US publication to Porter '851

Regarding claims 12,16 US publications to Matsuno et al. or Porter are relied upon to provide the known concept of a drive axle assembly 23 incorporating a hydraulically controlled clutch at 61 (see Matsuno). Porter provides a similar description in figures 1 and 2 and on page 2 of the document.

To have employed such a clutch in the drive axle of Frost, as modified, would have been obvious to the ordinary skilled worker in the art as an alternative option of providing a limited slip differential, and therefore better traction.

6. Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. in view of CA 2492481 and Porter '851.

Regarding claims 23-32 Hara et al. and CA 2492481 are relied upon as discussed above. Note the transfer case at 22 of Hara et al. appears to be connected to the ABS system via the hydraulic pressure supply system at 16. CA 2492481 is relied upon as above. Porter is relied upon to show that the traction control system (commonly an integral part of stability control systems that also incorporate ABS systems) is fluidically coupled to the clutch at 44.

The requirements of claims 24-31 are fairly suggested by the combined teachings of the references above and the general knowledge available to one of ordinary skill in the art.

Response to Arguments

7. Applicant's arguments with respect to claims 8-20,23-31 have been considered but are moot in view of the new ground(s) of rejection.
8. This action is made FINAL based upon information submitted in the IDS. See MPEP 706.07(a).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

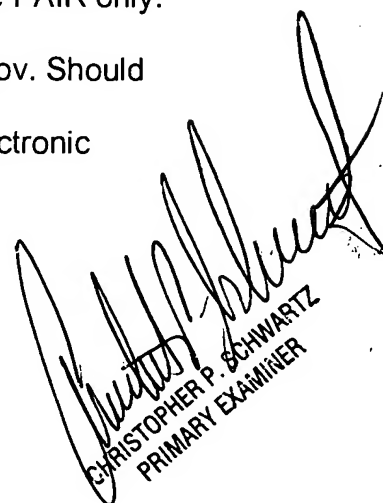
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **The references (newly) cited should be carefully reviewed before preparing a response to the action above as they also show the concepts known to the ordinary skilled worker..**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 571-272-7123. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 571-272-7099. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps


CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

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7/15/05